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jc780 U.S. PTO
03/15/00

To: Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

jc682 U.S. PTO
09/526105
03/15/00

NEW APPLICATION TRANSMITTAL - UTILITY

Sir:

Transmitted herewith for filing is a **utility** patent application:

Inventor(s): Ray Jessup and John Dinh

Title: SYSTEM AND METHOD FOR SENDING LOCAL INFORMATION FROM A WIRELESS BROWSER TO A WEB SERVER

I. PAPERS ENCLOSED HEREWITH FOR FILING UNDER 37 CFR § 1.53(b):

17 Page(s) of Written Description

4 Page(s) Claims

1 Page(s) Abstract

5 Sheets of Drawings ☐ Informal ☒ Formal

II. ADDITIONAL PAPERS ENCLOSED IN CONNECTION WITH THIS FILING:

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☒ Power of Attorney ☐ Separate ☒ Combined with Declaration

☒ Assignment to NeoPoint, Inc. and assignment cover sheet

☒ Verified Statement establishing **"Small Entity"** under 37 CFR §§ 1.9 and 1.27

☐ Priority Document No(s): _____

☐ Information Disclosure Statement w/PTO 1449 ☐ Copy of Citations

☐ Preliminary Amendment

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Multiple Dependent Claims	$260	(if applicable)				☐	$0.00
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V. AUTHORIZATION TO CHARGE FEES

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☒ 37 CFR § 1.16 – **(Filing fees and excess claims fees)**

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VI. CORRESPONDENCE ADDRESS

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Respectfully submitted,

LYON & LYON LLP

Dated: March 15, 2000

By: _____
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Applicant or Patentee: Ray Jessup and John Dinh
Serial or Patent No. : Not yet assigned
Filed or Issued: Herewith
For: SYSTEM AND METHOD FOR SENDING LOCAL INFORMATION FROM A WIRELESS BROWSER TO A WEB SERVER

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) AND 1.27(c)) – SMALL BUSINESS CONCERN

I hereby declare that I am

☐ the owner of the small business concern identified below:

☒ an official of the small business concern empowered to act on behalf of the concern identified below:

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third-part or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled

"SYSTEM AND METHOD FOR SENDING LOCAL INFORMATION FROM A WIRELESS BROWSER TO A WEB SERVER"

by inventor(s) Raymond K. Jessup and John Dinh

described in

☒ the specification filed herewith

☐ the application serial no. _____, filed _____.

☐ patent no. _____, issued _____.

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*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27).

NAME NeoPoint, Inc.

ADDRESS 4225 Executive Square, Suite 600, La Jolla, CA 92037

☐ Individual ☒ Small Business Concern ☐ Nonprofit Organization

NAME _____

ADDRESS _____

☐ Individual ☐ Small Business Concern ☐ Nonprofit Organization

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NAME OF PERSON SIGNING Matthew Gettinger
TITLE OF PERSON SIGNING Vice President and General Counsel
ADDRESS OF PERSON SIGNING 4225 Executive Square, Suite 600, La Jolla, CA 92037

SIGNATURE _____ DATE 3/13/00

SYSTEM AND METHOD FOR SENDING LOCAL INFORMATION FROM A WIRELESS BROWSER TO A WEB SERVER

Background of the Invention

1. Field of the Invention

The present invention relates generally to wireless communications and, more particularly, relates to a system and method for sending local information from a browser of a wireless communications device to a Web server.

2. Related Art

The advent of wireless personal communications devices has revolutionized the telecommunications industry. Cellular, personal communications services ("PCS") and other services provide wireless personal communications to businesses and individuals at home, in the office, on the road, and to any other location the wireless network can reach. Wireless telephone subscribers no longer must use public telephones along the road or wait until returning to the home or office to check messages or to return important business calls. Instead, wireless subscribers can carry out day-to-day business from the privacy of an automobile, from a remote job site, while walking along the airport concourse, and anywhere else that a personal communications signal is accessible.

Thus, it is no surprise that since the introduction of the cellular telephone service, the number of wireless telephone subscribers has increased steadily. Today, there are a staggering number of wireless telephone subscribers whose ranks are growing rapidly. In fact, many households have multiple wireless telephones in addition to their conventional land line services.

With a market of this size, there is fierce competition among hardware manufacturers and

service providers. In an attempt to lure customers, most providers offer handsets with desirable features or attributes such as small size, light weight, longer battery life, speed dial, and the like. Many recent additions to the marketplace include multi-functional handsets that even provide pocket organizer functions integrated into the wireless handset. Most manufacturers, however, are still scrambling to add new features to their communications devices to snare a portion of this booming market.

One way in which new features are added to wireless communication devices is by integrating the devices into the Web. Such integration allows the countless services available through the Web to be extended to wireless communications devices. Traditional web pages, however, usually contain too much information to be presented on the typically smaller display of a wireless communication device, such as a digital cellular telephone. To address this problem, new Web based programming languages such as the Handheld Device Markup Language ("HDML") have been developed to serve the wireless market. In serving the wireless market, HDML has evolved and is sometimes called the Wireless Markup Language ("WML"). This language, which will be referred to herein as HDML/WML, is part of a larger standard called the Wireless Application Protocol ("WAP"). WAP is a result of continuous work to define an industry wide standard for developing applications over wireless networks. The WAP forum was formed to create a global wireless protocol specification that works across differing wireless network technology types for adoption by appropriate industry standards bodies.

HDML/WML is a markup language intended for use in specifying content and user interfaces for narrow bandwidth ("narrowband") devices, including cellular phones, pagers, and personal digital assistants ("PDA"). HDML/WML was designed with the limitations and constraints of these narrowband, small screen devices specifically in mind. Some of these constraints include

a smaller display and limited user input facilities, a narrowband network connection and limited memory and computational resources.

Though HDML syntax is similar to HTML (Hypertext Markup Language) syntax, HDML is not a true markup language. It is a set of commands or statements that specifies how a narrowband device interacts with a user. HDML applications display information on the handset display and specify how the handset responds to user input. The text presentation and layout area is tailored to the smaller display area typical to a narrowband device. A "card and deck" organizational structure is used whereby all information is organized into a collection of screen sized cards, each of which specifies a single interaction between the handset and user. A deck contains one or more cards. HDML supports several types of cards, including entry cards, which display a message and allow the user to enter a string of text; choice cards, which display multiple options from which the user can choose one; and display cards, which display information only. Inter-card navigation and linking is supported for managing navigation between cards and decks. String parameterization and state management allow the use of state models to add parameters to decks.

Today, HDML/WML offers an efficient means of providing content and services from the Web infrastructure to wireless handheld devices such as cellular phones, pagers, and PDAs.

Summary of the Invention

The present invention uses the existing infrastructure of a wireless HDML/WML browser to send local information from a wireless handset to a Web server. The local information is of a type necessary to carry out a Web service requested by the handset user, such as determining the user's current location. The local information is sent to a remote Web server that carries out the requested service using the local information. If the local information is the handset GPS location, for

example, the server may determine a nearby restaurant and send that information back to the user, or the server may store the handset location for retrieval by other authorized users of the server.

In one embodiment of the present invention, a method for sending local information from a wireless handset to a Web server is provided. The method comprises the following steps:

(a) receiving a service request from a user of the wireless handset, wherein the service request comprises a type of local information needed to carry out the service request;

(b) acquiring the local information; and

(c) sending the local information to the Web server.

In another embodiment of the invention, a method for using a wireless browser to send local information from a wireless handset to a Web server or to dial a telephone number is provided. The method comprises the following steps:

(a) receiving an input from a user of the wireless handset, wherein the input comprises either a service request containing a type of local information needed to carry out the service request, or a telephone number to be dialed;

(b) determining whether the input comprises a service request or a telephone number;

(c) if the input is a telephone number, terminating the browser and dialing the telephone number; and

(d) if the input is a service request, acquiring the local information and sending the local information to the Web server via the wireless browser.

The present invention also provides a wireless communication system comprising a wireless handset. The handset has a transceiver for sending and receiving communications across a wireless communication network and an Internet browser. The browser is configured to accept a user input comprising either a telephone number to be dialed or a service request. If the input is a service

request, it will include the type of local information needed to carry out the request and the URL address of a Web server. The Web server is in communication with the handset over the network, receives the local information from the Internet browser and carries out the service request using the local information that is received.

Other aspects and advantages of the present invention will be apparent in the following description, claims and drawings.

Brief Description of the Drawings

The present invention is described with reference to the accompanying drawings, in which like reference numerals refer to like parts.

Figure 1 is a block diagram of a wireless communication device.

Figure 2 is a block diagram of a wireless communication system according to the present invention.

Figure 3 is a flowchart of a method for requesting information across a wireless network according to the present invention.

Figure 4 is a diagram of a handset display depicting a sample set of HDML/WML interface cards for dialing a telephone number.

Figure 5 is a diagram of a handset display depicting a set of HDML/WML interface cards for sending local information from a wireless handset to a Web server.

Figure 6 is a flowchart of a method for sending information across a wireless network to a Web server according to the present invention.

Detailed Description of Preferred Embodiments

1. Introduction and Overview

The present invention provides a system and method for sending local information from a wireless communication device having an HDML/WML browser to a Web server. The local information that is sent may be the location of the device, or other information such as map, driving, contact and/or scheduling information, or the location of retailers, goods, services, or other points of interest near the handset. The local information is sent to a remote Web server that carries out a requested service using the local information.

2. Example Environment

Before describing the invention in detail, an example environment in which the invention can be implemented will be described. One example environment is a handset or communication device operating within a wireless communication network such as, for example, a cellular, GSM, PCS or radio communication network. One example wireless communication device (handset) 100 is illustrated in **Figure 1**. Wireless communication devices embodying the present invention, however, can be implemented in various configurations and architectures. Implementation of the invention is not dependent on any particular device architecture or communication network.

Handset 100 includes processor 104, speaker 106, display 108, keypad 110, transceiver 122, memory 114, microphone 116, power source 118 and antenna 120. Handset 100 is typically a mobile unit such as a handheld cellular phone or an integrated vehicle phone. It is configured to communicate with other communications devices such as base station 112. Base station 112 is located within a geographic area known as a "cell" and handles communications for all mobile units within the cell.

Processor 104 directs the overall operation of handset 100. A computer program or set of instructions is typically coded or otherwise implemented on the processor to enable the processor

to carry out the device operation. As will be described in more detail below, an Internet or World Wide Web ("Web") browser may be coded into the processor and used as the operating system for handset 100. Memory 114 interfaces with processor 104 and may store program code and provide storage space for data useful in executing the program code and carrying out handset functions. Memory 114 may be implemented as Read Only Memory ("ROM"), Random Access Memory ("RAM") or as any other convenient memory format. The features and functionality of the invention described below may be implemented using hardware, software or a combination of hardware and software. If implemented as software, the software may run on processor 104 or be stored in memory 114.

Transceiver 122 includes a transmitter that transmits voice and data information via antenna 120 to a recipient communication device (such as base station 112), and a receiver that receives voice and data information from a transmitting communication device (such as base station 112). User interface features include speaker 106, display 108, keypad 110 and microphone 116. Microphone 116 accepts voice or other audio information from the user and converts this information into electrical signals that can be transmitted by transceiver 122. Likewise, speaker 106 converts electrical signals received by transceiver 122 into audio information that can be heard by a user of device 100. Display 108 displays information such as call information, keypad entry information, signal presence and strength information, battery life information, and other useful information. Display 108 preferably takes the form of a liquid crystal display ("LCD"), which has low power consumption characteristics, but could also be implemented as a light emitting diode ("LED") display or any other appropriate visual indicator. Keypad 110 typically includes an alphanumeric keypad and special function keys. It may be backlit to permit viewing of the keys in low light or dark conditions. A flip panel (not shown) may conceal all or a portion of keypad 110.

Power source 118 provides power to device 100. It may be implemented with rechargeable batteries, such as NiCad or NiMH rechargeable batteries, or with any other suitable power source.

3. Wireless Services Through a Web Server

Figure 2 is a block diagram illustrating a wireless communication system according to the present invention. The communication system provides information to a wireless handset based on the location of the device. It includes a wireless handset 130 and a hands-free unit 132 incorporating a position determination system 134. Handset 130 can be implemented in a configuration similar to that of handset 100 of **Figure 1**, or in any other device configuration that is capable of communicating with remote locations via a wireless communication medium. In the description below, "handset" refers to any communication device capable of communicating with other devices via a wireless medium.

Hands-free unit 132 is optionally provided to allow the user of handset 130 to communicate in a hands-free mode. Hands-free unit 132 may include a microphone and speaker to provide handset 130 with speakerphone-like capabilities. Such capabilities are particularly desirable where handset 130 is utilized in an automobile or other mobile situation. In one implementation, hands-free unit 132 is configured according to conventional industry standards for a "hands-free kit".

As mentioned above, hands-free unit 132 is preferably equipped with a position determination system 134 that determines the location of hands-free unit 132 and handset 130. Position determination system 134 could also be directly incorporated into handset 130. System 134 determines location in terms of parameters such as latitude, longitude, height, speed of travel, and other useful location or position parameters. In one implementation, position determination system 134 uses the Global Positioning System ("GPS") or differential GPS, the operation of which is well known to those of ordinary skill in the art. Alternative position determination systems, such as

triangulation systems, may also be used.

Handset 130 preferably includes both a voice and data interface, particularly where position determination system 134 is incorporated in hands-free unit 132. The voice interface provides hands-free operation and speakerphone-like capabilities. The data interface allows location information obtained by system 134 to be provided to handset 130 for transmission over wireless network 140.

Handset 130 communicates with other entities via wireless network 140. Network 140 is typically comprised of a plurality of base stations that provide relay points for communication. Network 140 may be a cellular, PCS, GSM, or any other wireless communication network. In addition to conventional communication with other wired or wireless communication devices, as shown in **Figure 2**, network 140 permits communication between handset 130 and data server(s) 136. When a user requests information, handset 130 provides the location of the handset to server 136 across wireless network 140. Server 136 retrieves relevant information from an associated database 138 and conveys the information to handset 130 over wireless network 140. The information may be displayed on the handset display or audibly rendered via speech synthesis or prerecorded scripts. Although the type of information stored in database 138 is virtually limitless, several example applications are provided for illustrative purposes.

In one example application, driving directions to a destination address are provided to handset 130. The handset user requests driving directions to the destination, and the handset relays the request to server 136 over wireless network 140. At the time of the request, the handset location is also provided to server 136 to provide a starting point for the directions. Using the handset location and the destination address, server 136 calculates a route and compiles driving directions. The driving directions are transmitted to handset 130 over network 140 and are displayed or audibly

rendered to the user. In addition to textual driving directions, a map showing the route may be displayed on the handset display. Options such as the shortest possible route, interstate route, safest route, most scenic route, etc. may be provided. The user's choice of options will dictate the route calculation. The options may be stored locally and prompts or scripts generated in the memory of handset 130. Alternatively, the options, prompts and scripts may be stored at server 136 and provided to the user via network 140.

Another example application locates particular types of businesses or services in the user's location. Restaurants, gas stations, hotels and other businesses or services near the user's location can be identified and provided to the user. Again, the user requests the business or service type vocally or via keypad entry. The request is communicated to server 136 over wireless network 140, along with the user's current location as determined by the position determination system 134. Server 136, based on the handset location and user request, retrieves and returns relevant information to handset 130 over network 140.

Parameter limits or filters may be implemented to refine the request and selections returned. The user may set a location filter, for example, that requires returned selections be within a certain maximum number of miles of the user's current location. If the user is seeking a restaurant, the user may request or be prompted to select parameters that refine the search results. These parameters may include cuisine type (e.g., Italian, French, American, etc.), restaurant type (e.g., fast food, casual dining, formal, etc.), price range and so on. Additionally, for restaurants, gas stations, motels and other businesses, the user may identify a preferred national or regional chain. Alternatively, the user may have a preferences profile stored in the Web server 136 that contains this information.

As noted above, the search may be refined (the query narrowed) on the user's own initiative or based on system prompts. If the user simply requests a nearby restaurant, for example, server 136

may prompt the user with questions about parameters such as those described above. Alternatively, to conserve bandwidth over network 140, prompts can be stored locally and made by handset 130 (or hands-free unit 132) before the request is sent to server 136. In this embodiment, updated scripts and/or prompts may be downloaded from server 136 to handset 130. Preferably, memory-intensive data such as establishment locations, driving directions, etc. are stored in database 138 to minimize the amount of memory required in handset 130. The precise distribution of data storage among these devices will be influenced by factors such as available bandwidth, memory costs and airtime costs.

A method for requesting information across network 140 is illustrated in **Figure 3**. In step 202, a user initiates a request for information. In step 204, the system determines whether the request requires the handset location or position. If position information is required, the method proceeds from step 204 to step 212, where system 134 acquires the position of handset 130. If system 134 is situated in hands-free unit 132, unit 132 provides the position data to handset 130 for transmission to server 136 over wireless network 140 (step 214). If position information is not required, the method proceeds from step 204 directly to step 206.

In step 206, handset 130 sends the request to server 136 via wireless network 140. The request includes any position data acquired in steps 212-214. The present invention provides a novel method for sending the local information included in the request using an HDML/WML browser that will be described in more detail below. In step 208, server 136 retrieves the data or information requested from database 138 and communicates the data to handset 130 over network 140. In step 210, the data is displayed or provided to the user.

As described above, scripts or prompts may be provided to the user to refine the information request. If the scripts or prompts are stored in database 138 (as opposed to local storage in handset 130), they are retrieved by server 136 in step 208 and provided to the user in step 210. The user's

answers to the prompts are sent by handset 130 to server 136, which uses the refined information to retrieve additional data or information from database 138, or to further refine the user's query. This potentially repetitive process is illustrated in **Figure 3** by flow line 222 and the repetition of steps 202, 206 and 208.

4. Sending Local Handset Information to a Web Server

As noted above, the present invention provides a novel method for sending local handset information to a Web server using a wireless browser. A browser, as is well known to those of ordinary skill in the art, is a software application that is used to locate and display Web pages. In one implementation, an HDML/WML browser is used as the handset operating system and handset functions are accessed through the browser. The browser presents a list of options to the user such as, for example, accessing a phone list, accessing an inbox, and so on. In accordance with the present invention, one of the presented options is use of a Web service that requires local information from the handset, such as the location of the handset. The local information is sent to a Web server by the browser by modifying the phone dialing process such that the local information is sent as part of the URL (Uniform Resource Locator).

To provide a backdrop for the present invention, the process for instructing the handset to dial a number from a launched wireless browser will first be described. First, the user launches the wireless browser. At some point during browser operation, the user provides the browser with a telephone number to be dialed. The telephone number to be dialed will be referred to as the NUMBER input field. The NUMBER field may be acquired in a variety of ways. A user may directly input the number to be dialed into the handset keypad, or may input a unique identifier that enables the number to be retrieved from memory. Alternatively, the number to be dialed may be acquired via an alphabetical search of a database of contacts maintained in the handset memory.

Once the NUMBER field is acquired, the web browser displays the number on the handset display and asks for affirmation from the user that the displayed number is the number that should be dialed. The user may affirm the displayed number by selecting an "OK" option, pressing an "OK" button or the like. Once the user has affirmed the number to be dialed, the browser executes a "Call" function using the telephone number as the variable input. At this point, the handset ends the browser application and initiates the dialing process.

As noted above, HDML/WML uses a "card and deck" organizational structure whereby all information is organized into a collection of screen sized cards, each of which specifies a single interaction between the handset and user. **Figure 4** depicts a sequence of HDML/WML user interface cards 230 and 235 as displayed to the user during the dialing process described above. First interface card 230 displays the number that the user wants to dial ("858-555-1212") and requests affirmation from the user ("OK"). Second interface card 235 displays the status of handset 100 during the connection process as well as the telephone number that the handset is attempting to connect with. An example of an HDML/WML code section associated with card 230 is set forth below:

```
<HDML VERSION=3.0>
      <DISPLAY>
            <ACTION TYPE=ACCEPT LABEL=OK TASK=CALL NUMBER=858-555-1212>
            Dial Number
            <BR>858-555-1212
      </DISPLAY>
</HDML>
```

The first line of code defines the header of the HDML deck. All HDML decks must begin

with an <HDML> tag and end with an </HDML> tag (line 6). The second line of code defines the header of the display card. Like HDML decks, cards require beginning (<DISPLAY>) and ending tags (</DISPLAY>). The third line of code defines an action, which specifies what the handset should do when the user presses a specified function key. The TYPE=ACCEPT portion identifies the function key, in this case the ACCEPT key, and the LABEL=OK portion instructs the browser to apply an "OK" label to the ACCEPT key, thereby inviting the user to press the ACCEPT key in order to proceed. The TASK=CALL specifies what the handset should do when the user presses the ACCEPT key, in this case, switch the handset to voice mode and call the number specified in the NUMBER option, which is NUMBER=858-555-1212.

Lines 4 and 5 provide the text that is displayed on the handset display (card 230). "Dial Number" is displayed in a first text line, and "858-555-1212" is displayed in a second text line. The <BR> command preceding line 5 instructs the browser to start a new line of text. The "OK" text appears because of the LABEL=OK portion of line 3. When the handset user presses the ACCEPT button to accept the "OK" option on card 220, the HDML/WML browser executes the "Call" task, using the 858-555-1212 telephone number as a variable input. The browser application is terminated and the phone number is dialed. In this fashion, a user is able to dial a phone number directly from the HDML/WML browser.

The present invention modifies this existing HDML/WML infrastructure to permit local information to be sent from the handset to a Web server using the browser. **Figure 6** is a flowchart illustrating a method 250 for sending local information to a Web server from a wireless handset. In the context of the method for requesting information across a wireless network 140 illustrated in **Figure 3**, method 250 would be carried out in step 206.

In step 252, the handset user launches the wireless browser application. In an

implementation where the browser acts as the handset operating system, step 252 may occur automatically (without user action). In step 254, the user selects either a web service or a telephone number to be dialed. The user's selection is entered into the variable input portion of the NUMBER=XXXX instruction in the HDML/WML code set forth above. Where a telephone number to be dialed is selected, the telephone number is inserted into the NUMBER field. Where a web service is selected, a local information type indicator, followed by the URL, is entered into the number field. "GPS", for example, may be used to indicate that local information comprising the location of the handset is required. Hence, if the user selects a browser option such as "Display my Current Location", the browser may enter "GPShttp://www.myaladdin.com/NP?" into the NUMBER field, wherein "GPS" indicates the local information type required, and "http://www.myaladdin.com/NP?" is the URL address.

At decision node 256, the handset determines whether the user has selected a Web service requiring local information or a telephone number to be dialed. In one implementation, the browser accomplishes this by determining whether the NUMBER variable input has an information type field (i.e., "GPS"). In another implementation, the browser may determine whether the NUMBER variable input includes a URL address. If the user has selected a number to be dialed, the method proceeds to step 258 and the browser dials the number as described above. The "Call" function is executed to terminate the browser and dial the phone number.

If, at node 256, the handset determines that the user has selected a Web service requiring local information, the method proceeds to step 260. In step 260, the browser acquires the local information necessary to carry out the request. If the service requested is the user's current location, for example, the browser will acquire the current GPS data from position determination device 134. Other types of local information may include user preferences, schedule, contact information and

so on. In step 262, the handset extracts the URL from the service request (the NUMBER input). Typically, the URL will be the address of a Web server that will carry out the information request. The local information acquired by the browser is appended to the URL address in step 264 and, in step 266, the handset instructs the browser to go to the URL address rather than terminating the browser and dialing the number in the NUMBER field. Where the handset location has been requested, for example, the URL address with local information appended may be "http://myaladdin.com/NP?long=111.1111&lat=222.2222&time=<string(URL encoding format)>". Hence, the browser is able to proceed to the server addressed by the URL and provide the server with the local information (appended to the URL) that is necessary to carry out the request. Once the server has the local information, it will carry out the request and communicate the results to the handset (steps 208 and 210 of **Figure 3**).

An example of an HDML/WML code section associated with displaying a card 240 (**Figure 5**) for the Web service "Where am I?" is set forth below:

```
<HDML VERSION=3.0>
        <DISPLAY>
                <ACTION TYPE=ACCEPT LABEL=OK TASK=CALL NUMBER=GPShttp://www.myaladdin.com/NP?>
                Service
                <BR>Where am I
        </DISPLAY>
</HDML>
```

As can be seen, this code section is similar to the code section for the dialing of a phone number. The variable NUMBER field in the third line, however, is the URL address of a server preceded by an information type field. This will indicate to the handset that rather than terminating the browser and dialing the number, it should acquire the local information, append it to the URL,

and proceed to the URL (steps 260-266 of method 250). The fourth and fifth lines of code display text associated with the locator service, rather than the dial number function.

The system and method described above may be implemented as computer programs, software or hardware or a combination of hardware and software, and may be implemented in a computing system having one or more processors. The HDML/WML code that controls the wireless web browser, for example, may be coded in processor 104 or stored in memory 114. Alternatively, the program or portions of it could be stored on server 136 and downloaded to handset 130 as needed.

Various embodiments of a system and method for sending local information from a wireless communications device to a web server have been described herein. These embodiments are presented for exemplary purposes only, however, and are not intended to limit the scope of the invention, which is defined by the following claims and their equivalents.

Claims

1. A method for sending local information from a wireless handset to a Web server comprising the following steps:

(a) receiving a service request from a user of the wireless handset, wherein the service request comprises a type of local information needed to carry out the service request;

(b) acquiring the local information; and

(c) sending the local information to the Web server.

2. A method as claimed in claim 1, wherein the service request received in step (a) also comprises the URL address of the Web server.

3. A method as claimed in claim 2, wherein step (c) comprises extracting the URL address from the service request, appending the local information to the URL address, and navigating a wireless browser to the URL address.

4. A method as claimed in claim 3, wherein the wireless browser is an HDML/WML browser.

5. A method as claimed in claim 1, wherein the local information comprises the geographic location of the handset.

6. A method as claimed in claim 5, wherein the geographic location is obtained from GPS data provided by a position determination system associated with the handset.

7. A method for using a wireless browser to send local information from a wireless handset to a Web server or to dial a telephone number comprising the following steps:

(a) receiving an input from a user of the wireless handset, wherein the input comprises either a service request containing a type of local information needed to carry out the service request, or a telephone number to be dialed;

(b) determining whether the input comprises a service request or a telephone number;

(c) if the input is a telephone number, terminating the browser and dialing the telephone number; and

(d) if the input is a service request, acquiring the local information and sending the local information to the Web server via the wireless browser.

8. A method as claimed in claim 7, wherein the wireless browser is an HDML/WML browser.

9. A method as claimed in claim 8, wherein in step (a), if the input is a telephone number, the telephone number is inserted into the NUMBER field following an HDML/WML CALL command, and if the input is a service request, the type of local information needed and the URL address of the Web server is inserted into the NUMBER field following the HDML/WML CALL command.

10. A method as claimed in claim 9, wherein step (b) comprises determining whether the NUMBER field includes a local information type.

11. A method as claimed in claim 9, wherein step (b) comprises determining whether the NUMBER field includes a URL address.

12. A method as claimed in claim 9, wherein step (d) comprises extracting the URL address from the NUMBER field and appending the local information to the URL address, and navigating the browser to the URL address.

13. A method as claimed in claim 7, wherein the local data comprises the GPS position of the handset.

14. A wireless communications system comprising:

a wireless handset comprising a transceiver for sending and receiving communications across a wireless communication network and an Internet browser configured to accept a user input comprising either a telephone number to be dialed or a service request comprising a type of local information needed to carry out the request and a URL address; and

a Web server located at the URL address contained in the service request and in communication with the handset over the network, the Web server receiving the local information from the Internet browser and carrying out the service request based on the local information.

15. A system as claimed in claim 14, and further comprising a position determination system for providing local information to the browser comprising the geographic location of the handset.

16 A system as claimed in claim 15, wherein the position determination system is a GPS receiver.

DRAFT - 09/09/02 - 09:09 PM

Abstract

A system and method for using a wireless browser to send local information from a wireless handset to a Web server. A service request received from a handset user includes the type of local information needed to carry out the request as well as the URL address of the server. The handset confirms that the input is not a telephone number to be dialed. If the input is a telephone number, the browser is terminated and the number is dialed. Otherwise, the browser acquires the local information needed to carry out the request from the handset. The local information is appended to the URL address, which is extracted from the user input, and the browser is instructed to navigate to the URL address to provide the local information to the server.

Docket No. SD-138310

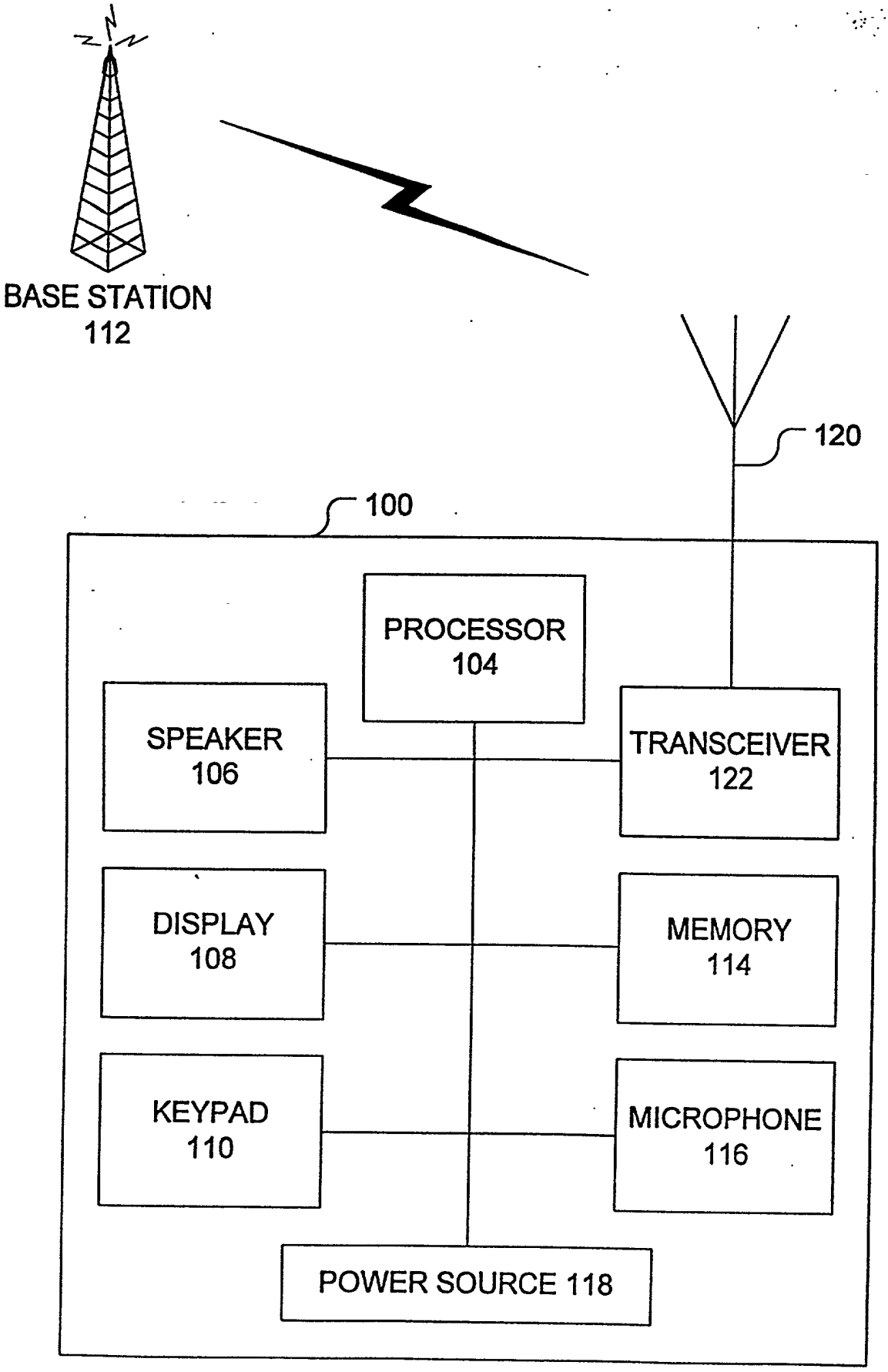
BASE STATION
112
120
100
PROCESSOR
104
SPEAKER
106
TRANSCEIVER
122
DISPLAY
108
MEMORY
114
KEYPAD
110
MICROPHONE
116
POWER SOURCE 118

Fig. 1

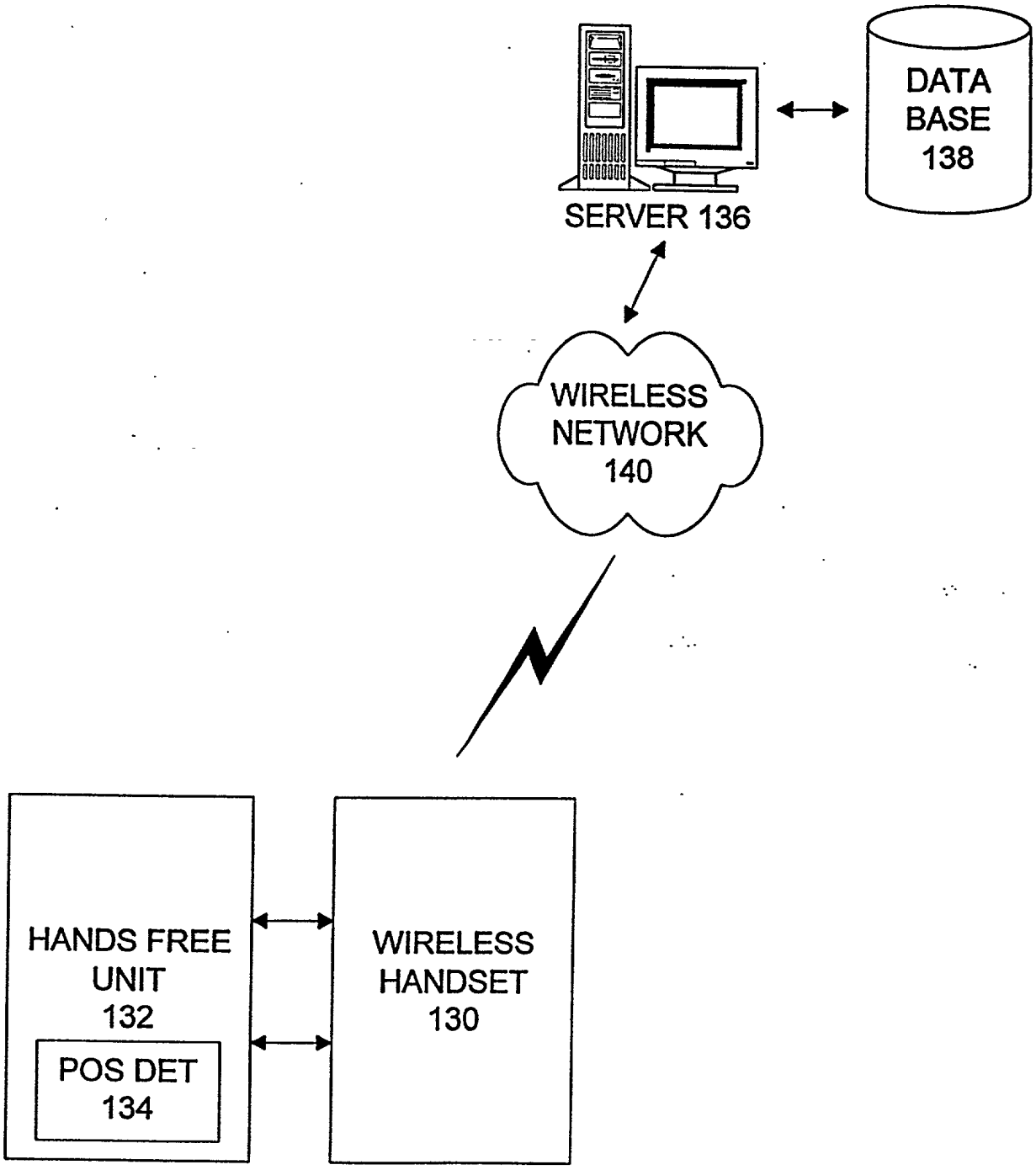
DATA
BASE
138
SERVER 136
WIRELESS
NETWORK
140
HANDS FREE
UNIT
132
POS DET
134
WIRELESS
HANDSET
130

Fig. 2

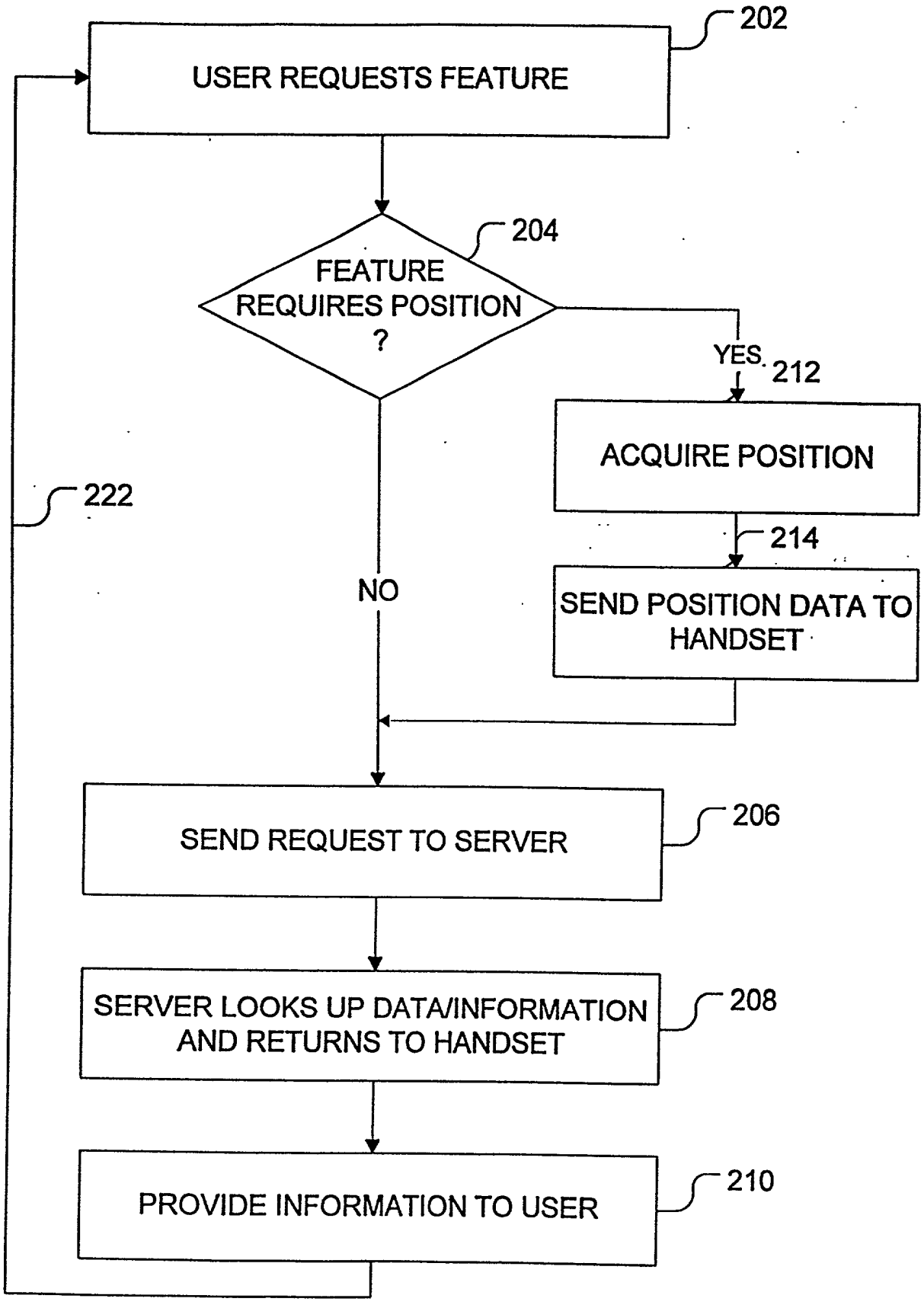
202
USER REQUESTS FEATURE
204
FEATURE REQUIRES POSITION ?
YES
212
ACQUIRE POSITION
214
SEND POSITION DATA TO HANDSET
NO
222
206
SEND REQUEST TO SERVER
208
SERVER LOOKS UP DATA/INFORMATION AND RETURNS TO HANDSET
210
PROVIDE INFORMATION TO USER

Fig. 3

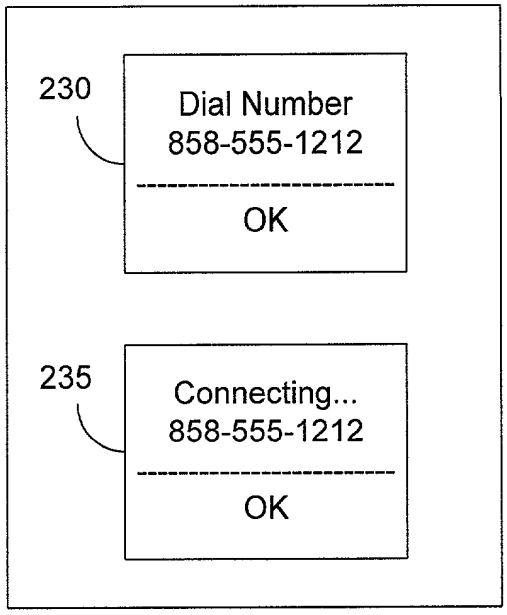

Figure 4

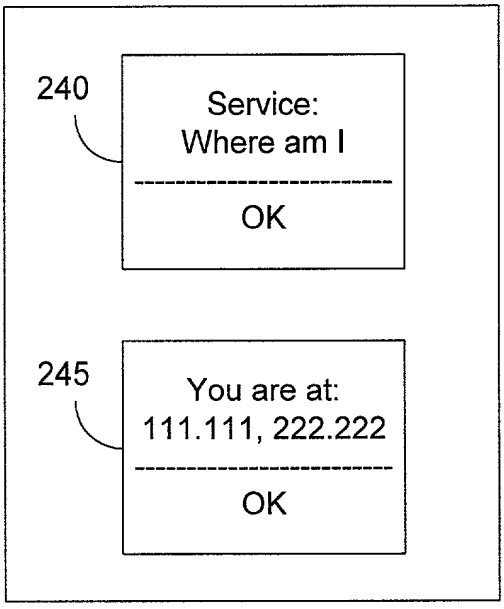

Figure 5

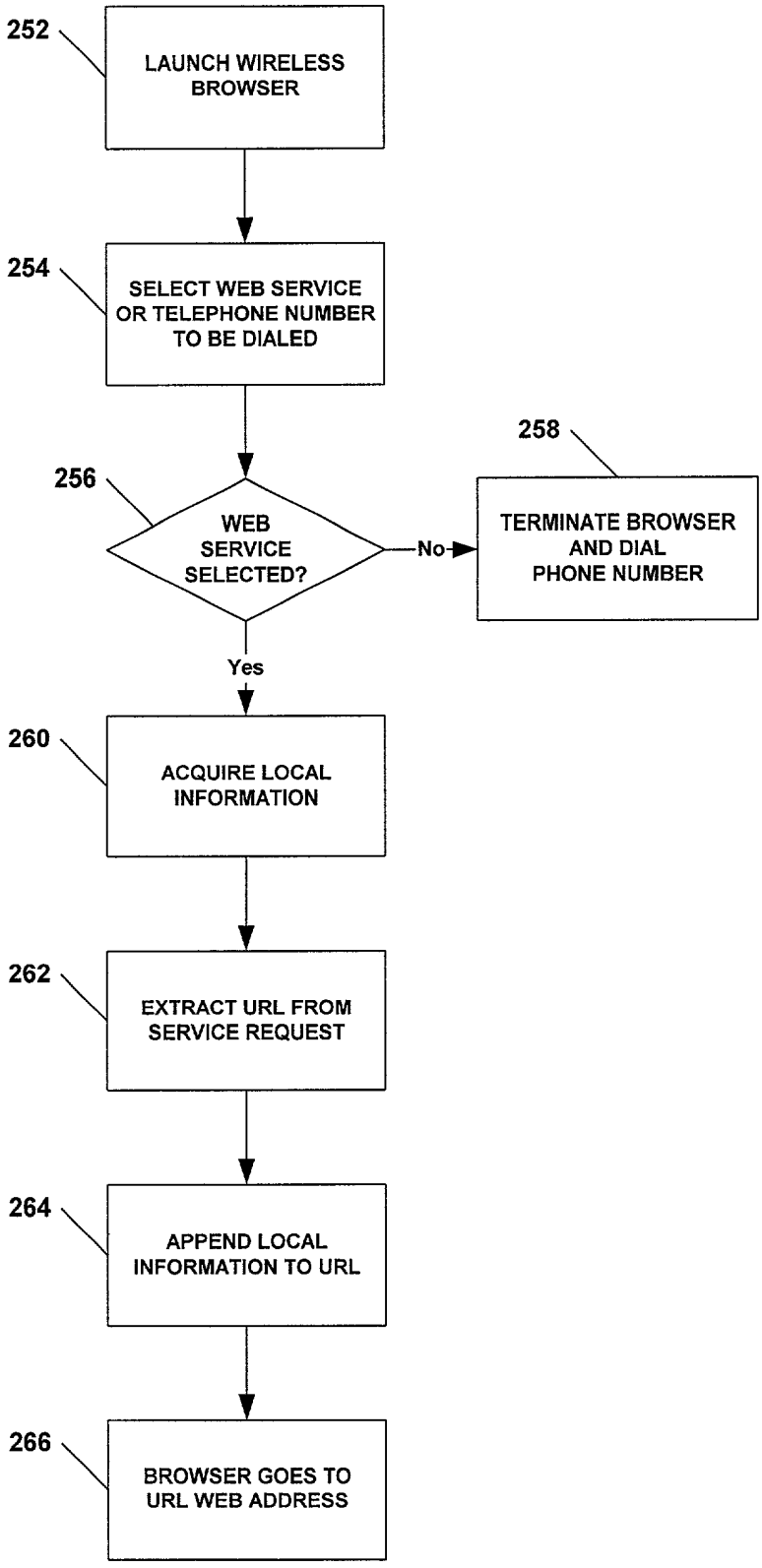
252
LAUNCH WIRELESS BROWSER
254
SELECT WEB SERVICE OR TELEPHONE NUMBER TO BE DIALED
256
WEB SERVICE SELECTED?
No
258
TERMINATE BROWSER AND DIAL PHONE NUMBER
Yes
260
ACQUIRE LOCAL INFORMATION
262
EXTRACT URL FROM SERVICE REQUEST
264
APPEND LOCAL INFORMATION TO URL
266
BROWSER GOES TO URL WEB ADDRESS

Figure 6

UTILITY DECLARATION
AND POWER OF ATTORNEY
Utility Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **SYSTEM AND METHOD FOR SENDING LOCAL INFORMATION FROM A WIRELESS BROWSER TO A WEB SERVER** the specification of which

(Check One)

☒ is attached hereto OR

☐ was filed on _____ as United States Application Serial No. Not yet assigned or PCT International Application No. _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Date of Filing	Priority Claimed Yes	Priority Claimed No

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Number	Parent Filing Date	Status-Patented, Pending or Abandoned

POWER OF ATTORNEY: As a named inventor, I hereby appoint as my attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and transact all business in the United States Patent and Trademark Office, and in countries other than the United States, and to do all things necessary or appropriate therefor before any competent International Authorities in connection with any international patent application(s) corresponding to the above-identified invention application, all of the registered practioners identified by Customer Number 22249:

22249
PATENT TRADEMARK OFFICE

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(213) 489-1600

Please send all correspondence to the attention of Troy M. Schmelzer, and direct all telephone calls to **(858) 552-8400.**

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

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INVENTOR'S SIGNATURE _____ DATE _____

PATENT APPLICATION